**BIO-COM**

**QUARTERLY 2**

**2013 – STUDY GUIDE**



1. Photosynthesis takes place in the \_\_\_\_.

2. What is the correct order of steps in the scientific method?

3. The regulation of an organism’s internal environment to maintain conditions suitable for life is the definition of \_\_\_\_.

4. What are the three parts of an ATP molecule?

5. The process by which molecules move from an area of **higher** concentration **to** an area of **lower** concentration is the definition of \_\_\_.

6. A student is collecting the gas given off from a plant in bright sunlight at a temperature of 27°C. The gas being collected is probably \_\_\_\_\_.

7. What factors affect the rate of photosynthesis?

8. What is the correct sequence of events in cellular respiration?

9. The diffusion of water is called \_\_\_\_.

10. Prokaryotic cells differ from eukaryotic cells in that they do not contain a \_\_\_\_.

11. Specialized structures found inside eukaryotic cells and perform important

cellular functions are called \_\_\_\_\_.

12. The cell structure that provides support and protection for the cell and is found only in plant cells some fungi, some protists, and bacteria is the \_\_\_\_\_.

13. The organelle that controls most of the cell processes and contains DNA is the \_\_\_\_.

14. The organelle that uses energy from food to make high-energy compounds that the cell can use and is also known as the “powerhouse” of the cells is the \_\_\_\_.

15. Cellular respiration uses one molecule of glucose to produce \_\_\_\_.

16. What is the correct equation for cellular respiration?

17. A solution where the result of water movement makes the cell swell is a \_\_\_\_ solution.

18. . A cell shrinks when it is placed into a \_\_\_\_ solution.

19. The heart is an example of a \_\_\_\_\_.

20. Glucose moves through the cell membrane by \_\_\_ transport.

21. Identify the parts of the cell theory

22. . The function of the cell membrane is to \_\_\_.

23. A group of cells that works together to perform a certain function is called a(n) \_\_\_\_.

24. The stomach, small intestine, large intestine, etc., working together is an example of a(n) \_\_\_\_.

25. Bacteria, protozoa, algae and some fungus are examples of organisms that are \_\_\_\_.

26. Organic compounds that contain sugars and starches are \_\_\_\_.

27. Organic compounds that contain DNA and RNA are referred to a \_\_\_\_.

28. Organic compounds that make, replace, and repair cells are \_\_\_\_.

29. A type of protein that speeds up chemical reactions is/are called \_\_\_.

30. Information gathered from observing a plant grow 3 cm over a two-week period results in \_\_\_.

**Use Figure 8-4 to answer questions 31 - 35**

A student prepared two beakers with identical sprigs of a water plant as shown below. She placed one beaker (Beaker A) in the shade and the other beaker (Beaker B) beside a fluorescent lamp. She then changed the distance of the Beaker B from the lamp. She counted the bubbles given off by each sprig of the water plant. Shown here is the graph of the data for the beaker she placed in the light.

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| --- | --- | --- |
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**FIGURE 8-4**

31. Which beaker is the student’s control?

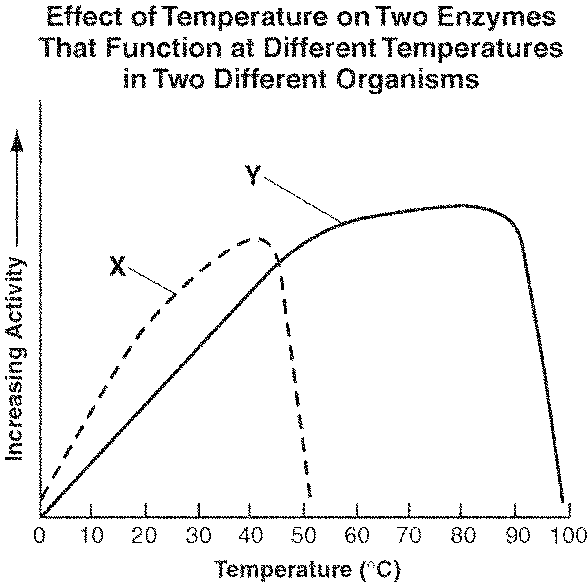
32. If the student later tested the air bubbles collected in the test tube, what would she find they are made of?

33. At what distance from the light source was the greatest number of bubbles produced?

34. What do the student’s data show?

35. If the lamp were placed closer than 5 centimeters from the water plant, what would happen to the rate of photosynthesis?

**Use Figure 2-3 to answer questions 36 – 40.**

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**FIG 2.3**

36. According to Figure 2-3, which enzyme would you expect to find in a bacteria growing in a hot spring?

37. According to Figure 2-3, at what temperature do the two enzymes have the same amount of activity?

38. According to Figure 2-3, which enzyme has a best working temperature of 40C?

39. Based on Figure 2-3, which enzyme is active over the largest temperature range?

40. Enzyme Y works best at what temperature?